PATENT APPLICATION
Mo6840
LeA 33,726

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION OF)
) GROUP NO.: 1756
FRIEDRICH-KARL BRUDER ET AL)
) EXAMINER: M. J. ANGEBRANNDT
SERIAL NUMBER: 10/009,746)
)
FILED: DECEMBER 5, 2001)
)
TITLE: USE OF CU-PHTHALOCYANINE)
SULFONAMIDES AS A DYE FOR)
WRITE-ONCE OPTICAL DATA)
STORAGE MEANS)

LETTER

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 2231-1450

Sir:

Enclosed herewith are three copies of an Appeal Brief (except if facsimile transmitted) in the matter of the subject Appeal. Please charge the fee for filing the Brief, $500.00, to our Deposit Account Number 50-2527. A separate Petition for Extension of Time is being submitted herewith.

Respectfully submitted,

By _____
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Attorney for Appellant(s)
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Diderico van Eyl, Reg. No. 38,641
Name of appellants, assignee or Registered Representative

Signature

June 2, 2005
Date

PATENT APPLICATION
Mo6840
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION OF

FRIEDRICH-KARL BRUDER ET AL

SERIAL NUMBER: 10/009,746

FILED: DECEMBER 5, 2001

TITLE: USE OF CU-PHTHALOCYANINE SULFONAMIDES AS A DYE FOR WRITE-ONCE OPTICAL DATA STORAGE MEANS

GROUP NO.: 1756

EXAMINER: M. J. ANGEBRANNDT

APPEAL BRIEF

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sirs:

This Brief is an appeal from the Final Office Action dated June 2, 2004, in which Claims 2, and 8-14 were finally rejected. The Brief also addresses the issues raised in the Advisory Action mailed January 11, 2005. A Notice of Appeal was filed on December 2, 2004. A separate Petition of Time is being filed simultaneously herewtih.

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Diderico van Eyl, Reg. No. 38,641
Name of appellants, assignee or Registered Representative

Signature

June 2, 2005
Date

I. REAL PARTY IN INTEREST

The real party in interest is LANXESS Deutschland, GmbH.

II. RELATED APPEALS AND INTERFERENCES

Appellants are unaware of any related appeals or interferences which directly or indirectly affect the present appeal.

III. STATUS OF CLAIMS

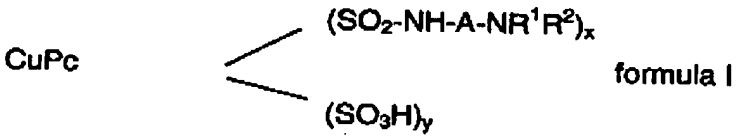
Claims 2 and 8-14 stand rejected.

IV. STATUS OF AMENDMENTS

Claims 2 and 8-14 stand as amended in an Amendment filed on February 18, 2004.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The claimed subject matter relates to an optical data carrier comprising a transparent substrate, a writable information layer applied to a surface of said substrate and an optional reflection layer, said writable information layer containing at least one phthalocyanine dye of the general formula I,



formula I

In the formula, CuPc represents a copper phthalocyanine group, A represents an optionally substituted straight chain or branched C_2-C_6 alkylene, R^1 and R^2, independently represent a member selected from the group consisting of hydrogen, straight chain or branched C_1-C_6 alkylene, substituted C_1-C_6 hydroxyalkyl, and an unsubstituted C_1-C_6 alkyl group, or R^1 and R^2, together with the nitrogen atom to which they are bonded denote a heterocyclic 5- or 6-membered ring , optionally containing another heteroatom, x is 2.0 to 4.0, and y is 0 to 1.5. The sum of x and y is 2.0 to 4.0. In one embodiment, the claimed subject matter relates to a process for producing the optical data carrier of Claim 8 comprising applying to a surface of a

transparent substrate a solvent mixture containing a phthalocyanine dye of the general formula I to form a writable information layer.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The issues before the Board are as follows:

1. Are Claims 2, 8-11 and 14 obvious under 35 USC 103 over U.S. Pat. No. 5,424,171(Yanagisawa)?

2. Are Claims 2, 8-11 and 14 obvious under 35 USC 103(a) as unpatentable over JP-63-307987 (Miyazaki '987) in view of EP-0519395 (Kovacs)?

3. Are Claims 2, 8-11 and 14 obvious under 35 USC 103 over Yanagisawa in view of U.S. Pat. No. 5,283,094 (Sasawaka) and U.S. Pat. No. 4,069,064 (Nett)?

4. Are Claims 2 and 8-14 under 35 USC 103(a) over Yanagisawa in view of Sasakawa and Nett, and further in view, of U.S. Pat. No. 4,111,650 (Lacroix), and in further view of U.S. Pat. No. 4,379,710 (Crouse) and JP-01-133790 (Miyazaki '790)?

VII. ARGUMENT

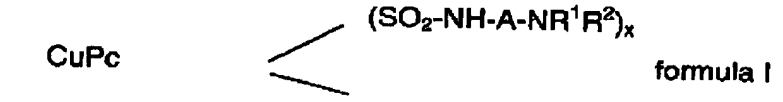
Appellants present their arguments below. Claims 2 and 8-14 stand together as a single group. Appellants also enclosed a previously submitted Declaration by Dr. Josef-Walter Stawitz. With respect to the Office comments that the Declaration is not proper, Applicants submit that this is not the case. The reaction of JP-63-307987 was made with chlorosulfuric acid. The Declaration supports Appellants' arguments.

1. Rejection of Claims 2, 8-11 and 14 under 35 USC 103 over Yanagisawa

The rejection of Claims 2 and 8-11 and 14 should be withdrawn, because the Final Office Action did not establish a *prima facie* case of obviousness. As Appellants will show below, the structural differences between their claimed invention and the teachings of the cited prior art are significant.

It is well settled that to establish a prima facie case of obviousness, the USPTO must satisfy all of the following requirements. First, the prior art relied upon, coupled with the knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or to combine references. *In re Fine*, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Second, the proposed modification must have had a reasonable expectation of success, as determined from the vantage point of one of ordinary skill in the art at the time the invention was made. *Amgen v. Chugai Pharmaceutical Co.* 18 USPQ 2d 1016, 1023 (Fed Cir, 1991), cert. denied 502 U.S. 856 (1991). Third, the prior art reference or combination of references must teach or suggest all of the limitations of the claims. *In re Wilson*, 165 USPQ 494, 496, (CCPA 1970).

Appellants' invention relates to an optical data carrier comprising (i) a transparent substrate, (ii) a writable information layer applied to a surface of the substrate and (iii) an optional reflection layer. The writable information layer contains at least one phthalocyanine dye of the general formula I,



formula I

$(SO_3H)_y$

in which CuPc represents a copper phthalocyanine group, A represents an optionally substituted straight chain or branched C_2-C_6 alkylene, R^1 and R^2, independently represent a member selected from the group consisting of hydrogen, straight chain or branched C_1-C_6 alkylene, substituted C_1-C_6 hydroxyalkyl, and an unsubstituted C_1-C_6 alkyl group, or R^1 and R^2, together with the nitrogen atom to which they are bonded denote a heterocyclic 5- or 6-membered ring , optionally containing another heteroatom, x is 2.0 to 4.0, y is 0 to 1.5 and the sum of x and y is 2.0 to 4.0.

Yanagisawa teaches an optical recording medium that is provided with (i) a light transmissive substrate; and (ii) a recording film and (iii) a reflective film which are formed on the light transmissive substrate (See Abstract). The recording film includes phthalocyanine dye expressed by the following general expression [I], shown in the Abstract, in which R_1 and R_2 represent either of hydrogen, hydroxyl group, alkoxyl group, and straight chained or side chained alkyl group, respectively, R_3 to R_6 represent either of substituted or non-substituted alkyl group, sulfino group, amino group, or sulfonic acid group, respectively, q represents the number of substituents and is the integer of 0 to 4, and Me represents a metal atom. A principal objective of Yanagisawa was to provide an optical recording medium, onto which an analog NTSC (National Television System Committee) image signal can be recorded by use of a simple semiconductor laser in a recording apparatus, under such a condition that a C/N (Carrier to Noise) ratio is high and a jitter is little, and which can be reproduced by a LD player etc. on the market. (See Summary of the Invention).

One of ordinary skill in the art following the teachings of Yanagisawa, without the benefit of the instant disclosure, would not have been motivated to modify Yanagisawa and make or practice Appellants' invention. The Si-substituted compound of Example 1 is structurally different from the dyes contained in the claimed invention. The assertion that it would have been obvious to substitute Si with Cu and that such a modification would have been suggestive of Appellants' invention is speculative and unwarranted. Without the benefit of Appellants' disclosure, one of ordinary skill in the art would not have been motivated to substitute Cu with Si in the compound of Example I and make Appellants' claimed combination of elements. As

Appellants have indicated previously, Yanagisawa requires that its compounds contain ligands R_1 and/or R_2. The dye required by Appellant's claimed invention do not. By such structural differences, Appellants' claimed invention is non-obvious.

The resulting combination would not have suggested an optical data carrier having a transparent substrate with a writable information layer containing at least one phthalocyanine dye of the general formula I, as claimed by Appellants. The resulting dye would have been structurally different from the dye Appellants are claiming. Withdrawal of the rejection is requested. Withdrawal of the rejection is requested.

Appellants claimed invention, however, is <u>further</u> non obvious, because an artisan would not have had had a reasonable expectation of success that the combination would result in the claimed invention.

The Final Office Action's comments about why Appellants previous arguments are not persuasive are improper, because they reflect reasoning that is not permissible under 35 USC 103. The comments are essentially attempts to explain why the claimed invention can be reconstructed. Without the benefit of the instant disclosure, the cited prior art lacks the requisite teachings that would have motivated one of ordinary skill in the art to make the alleged modifications and make or practice Appelants' invention. To imbue one of ordinary skill in the art with knowledge of the claimed inventiont, when no prior art reference or references of record convey or suggest that knowledge, is not permissible under 35 USC 103. See W.L. GORE & ASSOCIATES, INC., v. GARLOCK, INC., 721 F.2d 1540, 220 U.S.P.Q. 303.

The Final Rejection did not meet all of the requirements needed to establish a *prima facie* case of obviousness. Yanagisawa, coupled with the knowledge generally available in the art at the time of the invention, does not contain some suggestion or incentive that would have motivated the skilled artisan to modify Yanagisawa, as alleged by the Office Action. The proposed modification does not have had a reasonable expectation of success, as determined from the vantage point of one of ordinary skill in the art at the time the invention was made. Yanagisawa does not teach or suggest all of the limitations of Claims 2 and 8-11 and 14. Withdrawal of the rejection is requested.

2. Rejection of Claims 2, 8-11 and 14 under 35 USC 103 over JP-63-307987 (Miyazaki '987) in view of EP-0519395 (Kovacs)

The rejection of Claims 2, 8-11 and 14 under 35 USC 103 over Miyazaki in view of Kovacs should be withdrawn.

Miyasaki '987 teaches an optical recording medium containing a phtlalocyanine series dye of formula (I) in a recording layer formed on a transparent base plate, in which formula (I), Pc is a phtlalocyanine residue, M is a metal atom or cetral nucleus of metal oxide or metal halide, A is the following divalent bonded group or direct bond: --COO--, CH_2NR'-, $CH_2NHCOCH_2nH$-, SO_2NR' or -CONR' (R' is a hydrogen atom or a saturated or unsaturated alkyl group containing 1-20 carbons); m, n are mutually independent integers ranging from 1 to 4 and, R_1, R_2 are mutually independent hydrogen atoms, substituted or unsubstituted alkyl groups, or a hetero cycle in which at least a nitrogen aton is contained in R_1 and R_2 (See page 2).

One of ordinary skill in the art following the teachings of Miyasaki would not have been motivated to modify Miyasaki '987 and make or practice Appellants' invention. Miyasaki '987 teaches structurally different dyes than the dyes in Appellants' claimed invention.

Appellants realize that the rejection is based on Miyasaki in view of Kovacs and not on Miyasaki alone. However, Kovacs does not overcome the deficiencies of Miyasaki. And even if one of ordinary skill in the art following the teachings of Miyasaki had been aware of Kovacs, the artisan would not have made the alleged modification.

Kovacs teaches a recordable optical recording element having a transparent substrate and on the surface of the substrate, a phtlalocyanine dye-containing recording layer and a light reflecting layer, in which the phtlalocyanine dye is substituted in the β position of at least one aromatic ring with a sulfonamido or amido group (See Description, page 2). The document teaches a general fomula of a metal-Pc in which the metal can be Cu (page 3, 1.53). Although a radical of the Pc can be an sulphonamido (see p. 3, l. 25-30) no meaning of R or R' is alkylamino. The alkyl radicals of a R or R' (page 3, line 25-42) are unsubstituted because for the aromatic radical it is explicitely mentioned that they may be substituted but for

the alkyl radical not. Hence the invention of Kovacs does not allow an amino group terminal to be an alkyl group. Compound of Example 71 was compared with the cpd of our Example 1 and a substantially better solubility was found in the most common solvents used for spin coating processes. That means that compounds taught by Kovac can not be used for this application technique without causing serious problems in the production line (see enclosed declaration). As such, even if Miyasaki '987 were combined, the resulting teachings would suggest compounds a skilled artisan would expect to exhibit poor solubility in the most common solvents for spin coating and therfore would not combine the respective teaching of both to come to better performing embodiments as they are claimed according to the present invention. Withdrawal of the rejection is requested.

The Final Rejection did not meet all of the requirements needed to establish a *prima facie* case of obviousness. Miyakasi, singly or in combination with Kovacs, coupled with the knowledge generally available in the art at the time of the invention, does not contain some suggestion or incentive that would have motivated the skilled artisan to modify Miyakasi, as alleged by the Office Action . The proposed modification does not have had a reasonable expectation of success, as determined from the vantage point of one of ordinary skill in the art at the time the invention was made. Miyakasi, singly or in combination with Kovacs, coupled with the knowledge generally available in the art at the time of the invention, does not teach or suggest all of the limitations of claims 2 and 8-11 and 14. Withdrawal of the rejection is requested.

3. Rejection of Claims 2, 8-11 and 14 under 35 USC 103 over Yanagisawa in view of U.S. Pat. No. 5,283,094 (Sasawaka) and U.S. Pat. No. 4,069,064 (Nett)

The rejection of Claims 2, 8-11 and 14 under 35 USC 103 over Yanagisawa in view of Sasawaka and Nett should be withdrawn.

One of ordinary skill in the art following the teachings of Yanagisawa would not have been motivated by Sasawaka and Nett to modify Yanagisawa and make or practice Appellants' invention.

As discussed above, Yanagisawa teaches an optical recording medium that is

provided with (i) a light transmissive substrate; and (ii) a recording film and (iii) a reflective film which are formed on the light transmissive substrate (See Abstract). The recording film includes phthalocyanine dye expressed by the following general expression [I], shown in the Abstract, in which R_1 and R_2 represent either of hydrogen, hydroxyl group, alkoxyl group, and straight chained or side chained alkyl group, respectively, R_3 to R_6 represent either of substituted or non-substituted alkyl group, sulfino group, amino group, or sulfonic acid group, respectively, q represents the number of substituents and is the integer of 0 to 4, and Me represents a metal atom. A principal objective of Yanagisawa was to provide an optical recording medium, onto which an analog NTSC (National Television System Committee) image signal can be recorded by use of a simple semiconductor laser in a recording apparatus, under such a condition that a C/N (Carrier to Noise) ratio is high and a jitter is little, and which can be reproduced by a LD player etc. on the market. (See Summary of the Invention).

Sasawaka teaches an optical recording medium of a single plate type comprises a substrate, a recording layer overlying the substrate, a reflective layer overlying the recording layer, and a protective layer overlying the reflective layer, the recording layer being produced by coating a nonpolar solvent-soluble substituted phthalocyanine dye in a nonpolar solvent and the nonpolar solvent content of in the recording layer being 5% by weight or less (See Abstract).

Nett teaches a phthalocyanine formulation which is stabilized against recrystallization and change of modification and which contains, as the stabilizer (a) a finely divided phthalocyanine as the pigment and (b) a salt or the corresponding homogeneous mixture of α phthalocyanine derivative, which carries basic groups (R1 = H, alkyl of 1 to 20 carbon atoms, unsubstituted or substituted phenyl, $--C_2H_4--NH)_z H$ or $--(C_3H_6--NH)_z H$, $z = 1, 2$ or 3, and R2 = H, alkyl of 1 to 6 carbon atoms or cycloalkyl of 6 to 8 carbon atoms) and an aliphatic sulfonic acid of 8 to 20 carbon atoms, a monoalkylbenzenesulfonic acid or dialkylbenzenesulfonic acid where alkyl is of 6 to 20 carbon atoms, or a monoalkylnaphthalenesulfonic acid or dialkylnaphthalenesulfonic acid where alkyl is of 6 to 20 carbon atoms, which acids may be substituted by hydroxyl, the molar ratio of α: β being from 1:1 to 1:5, and, if desired, one or more organic fluids or solutions of resins in these fluids. Nett teaches

that the formulations are stable even in aromatic hydrocarbons and produce pure, deep colorations which have high gloss

Sawasaka's process for the preparation of optical data storage media containing PCs using special solvents would not have taught the Cu-based compounds encompassed by the claimed invention. Sawasaka would not be suggestive of the dye encompassed by the claimed invention. Sawasaka does not teach the Cu-based compound, let alone the claimed invention.

Nett would not provide teachings that would have motivated one of ordinary skill in the art to make the alleged modification. Nett teaches that the dodecylbenzenesulfonic acid and other organic sulfonic acids (as component beta; see col 1 line 66, col 2, line 32; col 6, line 8) are used to form the salt with the NHR group which has just introduced as substituent. In Example 51 this can be seen. This salt is used in a mixture with the pigment. Such teachings are not suggestive of Appellants' invention. Nett's very specific stabilizer-containing phthalocyanine formulation and Sawasaka's process for the preparation of optical data storage media containing PCs using special solvents would not have motivated one of ordinary skill in the art to modify Yanagisawa's optical recording medium containing (i) a light transmissive substrate; and (ii) a recording film and (iii) a reflective film which are formed on the light transmissive substrate and make or practice Appellants' invention.

The Final Rejection did not meet all of the requirements needed to establish a *prima facie* case of obviousness. Sasawaka, singly or in combination with Nett, coupled with the knowledge generally available in the art at the time of the invention, does not contain some suggestion or incentive that would have motivated the skilled artisan to modify Sasawaka, as alleged by the Office Action . The proposed modification does not have had a reasonable expectation of success, as determined from the vantage point of one of ordinary skill in the art at the time the invention was made. Sasawaka, singly or in combination with Nett, coupled with the knowledge generally available in the art at the time of the invention, does not teach or suggest all of the limitations of Claims 2 and 8-11 and 14. Withdrawal of the rejection is requested.

4. Rejection of Claims 2 and 8-14 under 35 USC 103 over Yanagisawa in view of Sasakawa and Nett and further in view of U.S. Pat. No. 4,111,650 (Lacroix), and in further view of U.S. Pat. No. 4,379,710 (Crouse) and JP-01-133790 (Miyazaki '790)

The rejection of Claims 2 and 8-14 under 35 USC 103 over Yanagisawa in view of Sasakawa and Nett and further in view of Lacroix and in further view of Crouse and Miyazaki '790 is not justified and should be withdrawn.

As indicated above, the teachings of Nett and Sasakawa would not have motivated one of ordinary skill in the art following the teachings of Yanagisawa to modify Yaganizawa and make or practice Appellants' invention. The teachings provided by Lacroix, Crouse and Miyazaki '790 do not provide meaningful details to make the alleged modifications.

Lacroix teaches a stable concentrated liquid preparation of a paper dye of the copper phthalocyanine class, which preparation contains 15 to 50 per cent by weight of the dye of the formula shown in its Abstract, in which CuPc denotes copper phthalocyanine, optionally in the form of an alkali salt, especially in the form of the sodium salt, dissolved in 30 to 65 per cent by weight of water, 5 to 15 per cent by weight of N-methylpyrrolidone, 1 to 7 per cent by weight of benzyl alcohol, and 1 to 5 per cent by weight of a lower aliphatic carboxylic acid and the use of this preparation for the dyeing and printing of paper, semi-cardboard and cardboard.

Crouse teaches storage-stable aqueous compositions containing dissolved water-soluble novel acid addition salts of poly(N-substituted sulfonamido) phthalocyanines which are prepared by the interaction of a single acid or a mixture of acids and poly(N-substituted sulfonamido) phthalocyanines, are useful for direct dyeing, particularly the dyeing of cellulose (See Abstract).

Such teachings are not suggestive of Appellants' invention. Lacroix compounds

are not used in optical media but for dyeing and printing paper, and cardboard. Such teachings, without the benefit of the instant disclosure, would not be suggestive of Appellant's claimed invention. Crouse teaches processes for dyeing for cellulose. Miyakasa '790 teaches Pc-compounds also have a ligand at the metal center they are not relevant and are not suggestive of the compounds required by Appellant's invention, which do not require ligands. As indicated above, to imbue one of ordinary skill in the art with knowledge of the claimed inventiont, when no prior art reference or references of record convey or suggest that knowledge, is not permissible under 35 USC 103.

The Final Rejection did not meet all of the requirements needed to establish a *prima facie* case of obviousness. Yanagisawa, singly or in combination with Sasawaka, Nett, Crouse and Miyasaki '790, coupled with the knowledge generally available in the art at the time of the invention, does not contain some suggestion or incentive that would have motivated the skilled artisan to modify Sasawaka, as alleged by the Office Action . The proposed modification does not have had a reasonable expectation of success, as determined from the vantage point of one of ordinary skill in the art at the time the invention was made. Yanagisawa, singly or in combination with Sasawaka, Nett, Crouse and Miyasaki '790, coupled with the knowledge generally available in the art at the time of the invention, does not teach or suggest all of the limitations of Claims 2 and 8-11 and 14. Withdrawal of the rejection is requested.

In view of the remarks above, withdrawal of all rejections is requested.

Respectfully submitted,

By _____

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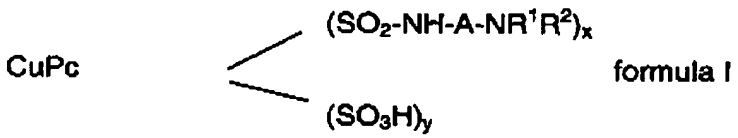
CLAIMS APPENDIX

2. The optical data carrier of Claim 8 wherein mixtures of phthalocyanine dyes represented by general formula (I) are present in the writable information layer.

8. An optical data carrier comprising a transparent substrate, a writable information layer applied to a surface of said substrate and an optional reflection layer, said writable information layer containing at least one phthalocyanine dye of the general formula I,



formula I

in which

CuPc represents a copper phthalocyanine group,

A represents an optionally substituted straight chain or branched C_2-C_6 alkylene,

R^1 and R^2, independently represent a member selected from the group consisting of hydrogen, straight chain or branched C_1-C_6 alkylene, substituted C_1-C_6 hydroxyalkyl, and an unsubstituted C_1-C_6 alkyl group, or R^1 and R^2, together with the nitrogen atom to which they are bonded denote a heterocyclic 5- or 6-membered ring , optionally containing another heteroatom

x is 2.0 to 4.0,

y is 0 to 1.5 and

and the sum of x and y is 2.0 to 4.0.

9. A process for producing the optical data carrier of Claim 8 comprising applying to a surface of a transparent substrate a solvent mixture containing a phthalocyanine dye of the general formula I to form a writable information layer.

10. The process according to Claim 9 wherein the solvent mixture contains a member selected from the group consisting of benzyl alcohol, water acidified with acetic acid and fluorinated alcohol.

11. The process according to Claim 10 wherein the fluorinated alcohol is 2,2,3,3-tetrafluoropropanol.

12. The process of Claim 9 wherein said solvent mixture is prepared by,

(a) first dissolving the dye in a solvent selected from the group consisting of benzyl alcohol, water acidified with acetic acid and fluorinated alcohol to form a solution; and

(b) then diluting the solution with a member selected from the group consisting of alcohols, ethers, hydrocarbons, halogenated hydrocarbons, CELLOSOLVE ethylene glycol alkyl ethers and ketones.

13. The process of Claim 12 wherein the fluorinated alcohol of step (a) is 2,2,3,3-tetrafluoropropanol; the alcohol of step (b) is selected from at least one of methanol, ethanol, propanol, diacetone alcohol and 1-methyl-2-propanol; the hydrocarbons of step (b) are selected from at least one of hexane, cyclohexane, ethylcyclohexane and octane; the halogenated hydrocarbons of step (b) are selected from at least one of tetrachloroethane and dichloromethane; the ethers of step (b) are selected from at least one of diethyl ether, dipropyl ether and dibutyl ether; the CELLOSOLVE ethylene glycol alkyl ethers of step (b) are selected from at least one of ethylene glycol methyl ether and ethylene glycol ethyl ether; and the ketones of step (b) are selected from at least one of methylethyl ketone and 4-hydroxy-4-methyl-2-pentanone.

14. The process of Claim 9 wherein the writable information layer is applied by spin-coating.

EVIDENCE APPENDIX

DECLARATION OF JOSEF-WALTER STAWITZ

IN THE UNITED STATES PATENT OFFICE

APPLICANT:	JOSEF-WALTER STAWITZ ET AL.
SERIAL NO.:	10/009,749
FILED:	May 12, 2001
TITLE:	Use of Cu-Phthalocyanine Sulfonamides as a dye for write-once optical data storage means

DECLARATION

I, JOSEF W. Stawitz, declare:

that I am a German citizen resident at Am Hagen, 50168 Odenthal, Germany;

that I am a chemist having graduated with a degree of Doctor rer. nat. from the University of Würzburg, Germany in 1978;

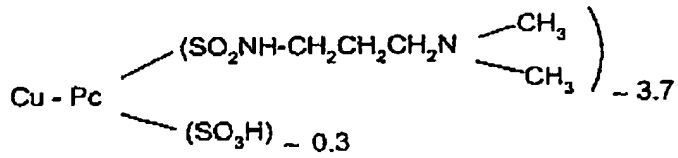
that I have since been concerned with the preparation of organic dyestuffs;

that I am one of the joint inventors of US Patent Application Serial No. 10/009 749 filed on May 12, 2001;

that I have read the Office Action of August 18, 2003 and the references cited therein;

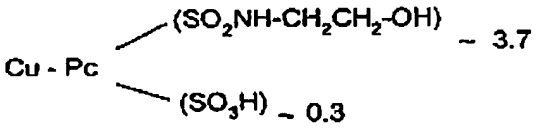
that the following dyestuff mixtures were tested under my supervision.

I.* Dye of the formula



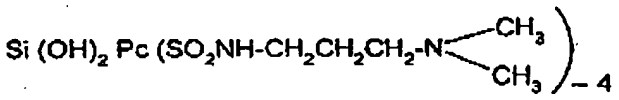
according to U.S-Patent Application Serial No. 10/009749, similar to Exp.1 (present invention).

II.* Dye of the formula



according to EP-A-519 395, exp. 71 (prior art).

III. Dye of the formula



analog to JP-A-63-307987 exp. 1 and 8h or analog to US-A-5,424,171 (see cpd of claim 1).

* the preparation of the compounds I and II was made on the basis of the same sulfochlorinated Cu – Pc.

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Tests

The following tests were made in order to have evidences whether or not applicability of the dye by using the spin coating technique is possible. For this, solution of the dyestuffs I, II and III respectively in most used solvents for spin coating, were made.

Such obtained solutions were given to a filter paper to see the chromatographic behavior. The respective filter papers are attached to this declaration.

A	(present invention):	cpd I (5% by weight) was dissolved in tetrafluoro-propanol. The product was completely dissolved.
B	(prior art):	cpd II (5% by weight) was tried to be dissolved in tetrafluoropropanol. The product was not dissolved completely.
C	(prior art):	cpd III (5% by weight) was tried to be dissolved in tetrafluoropropanol. The product could not be completely dissolved.
D	(present invention):	cpd I (10% by weight) was dissolved in benzyl alcohol. The product was completely dissolved.
E	(prior art):	cpd III (10% by weight) was tried to be dissolved in benzyl alcohol. The product was not dissolved completely.

Result

As can be seen from the attached card (respective filter paper are mounted thereon). The prior art cpd I shows a substantially better solubility in the most common solvents used for spin coating than the prior art dyestuffs II and III.

Conclusion

It was quite unexpected that the dye I according to the present invention exhibits a better solubility and therefore a better applicability with respect to spin coating technique than the prior art dyes II and III respectively.

The undersigning declarant declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: 2004-02-05

Signature: Josef-Walter Stawitz

Josef W. Stawitz

Enclosure of Declaration

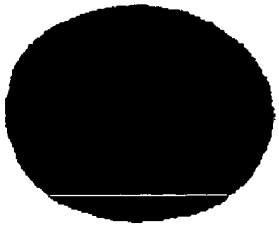
A

B

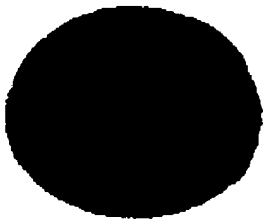
C

C

C



D



E